

Recall: Standard form of a Quadratic Expression is  $ax^2 + bx + c$

**Steps for using “Grouping” instead of “Trial and Error”**

- 1) Find the product of “a” and “c”
- 2) List the factors of “ac”
- 3) Identify the factor pair whose sum is “b”
- 4) Replace the “bx” term with 2 terms using the factors from step 3
- 5) Factor the new expression using “Grouping”

Examples:

3) Factor  $12x^2 + 5x - 2$

ac = \_\_\_\_\_

factor pairs of “ac”

Factor each of the following completely:

4)  $3x^2 + 9x - 12$

Homework: Factor each of the following completely

1)  $x^2 + 4x - 32$

5)  $24x^2y + 34xy + 12y$

2)  $3x^2 - 3x - 90$

6)  $5x^2 - 50x + 120$

3)  $6x^2 - 11x + 4$

7)  $9x^2 + 12x + 4$

4)  $15x^2 + 14x - 8$

8)  $24x^2 - 6xy - 9y^2$